Value Management Recommendations

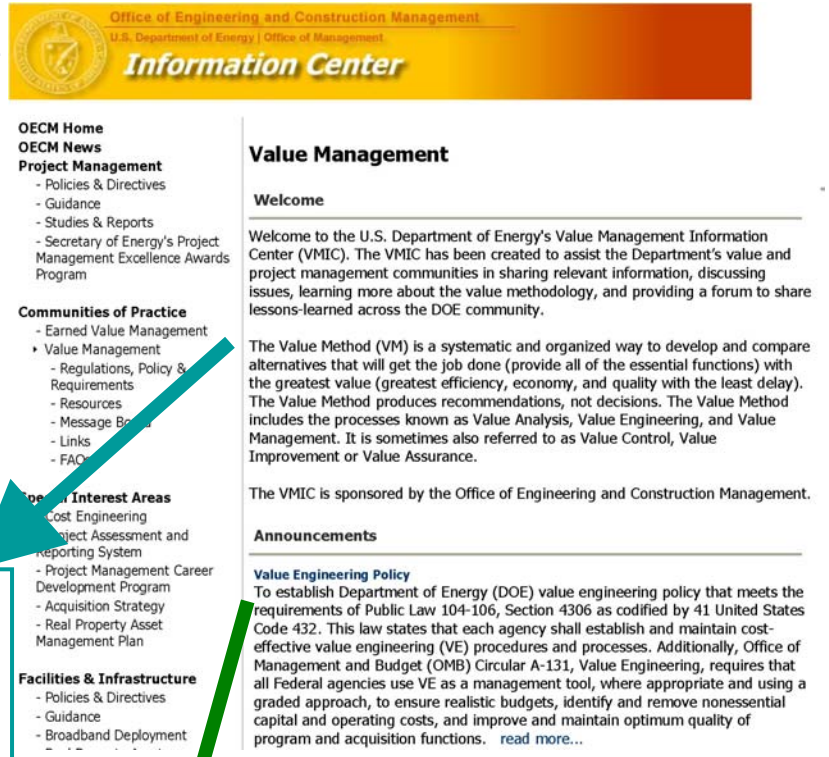
October 25, 2005

Agenda

- Methodology
- Detector Enclosure Roof
- Single Aisle Access
- Overburden Depth
- Lift-A-Loft vs. Catwalks

Methodology

- Done in compliance with DOE's Value Management principals.



The Value Method (VM) is a systematic and organized way to develop and compare alternatives that will get the job done (provide all of the essential functions) with the greatest value (greatest efficiency, economy, and quality with the least delay). The Value Method produces recommendations, not decisions.

http://oecm.energy.gov/Default.aspx?tabid=77

Additionally, Office of Management and Budget (OMB) Circular A-131, Value Engineering, requires that all Federal agencies use VE as a management tool, where appropriate and using a graded approach, to ensure realistic budgets, identify and remove nonessential capital and operating costs, and improve and maintain optimum quality of program and acquisition functions.

Methodology

THE VALUE METHODOLOGY JOB PLAN

The Value Methodology uses a systematic Job Plan. The Job Plan outlines specific steps to effectively analyze a product or service in order to develop the maximum number of alternatives to achieve the product's or service's required functions. Adherence to the Job Plan will better assure maximum benefits while offering greater flexibility.

PRE-STUDY

Collect User/Customer Attitudes
Complete Data File
Determine Evaluation Factors
Scope the Study
Build Data Models
Determine Team Composition

VALUE STUDY

Information Phase
Complete Data Package
Modify Scope

Function Analysis Phase
Identify Functions
Classify Functions
Develop Function Models
Establish Function Worth
Cost Functions
Establish Value Index
Select Functions for Study

Creative Phase
Create Quantity of Ideas by Function

Evaluation Phase
Rank and Rate Alternative Ideas
Select Ideas for Development

Development Phase
Conduct Benefit Analysis
Complete Technical Data Package
Create Implementation Plan
Prepare Final Proposals

Presentation Phase
Present Oral Report
Prepare Written Report

We Are Here

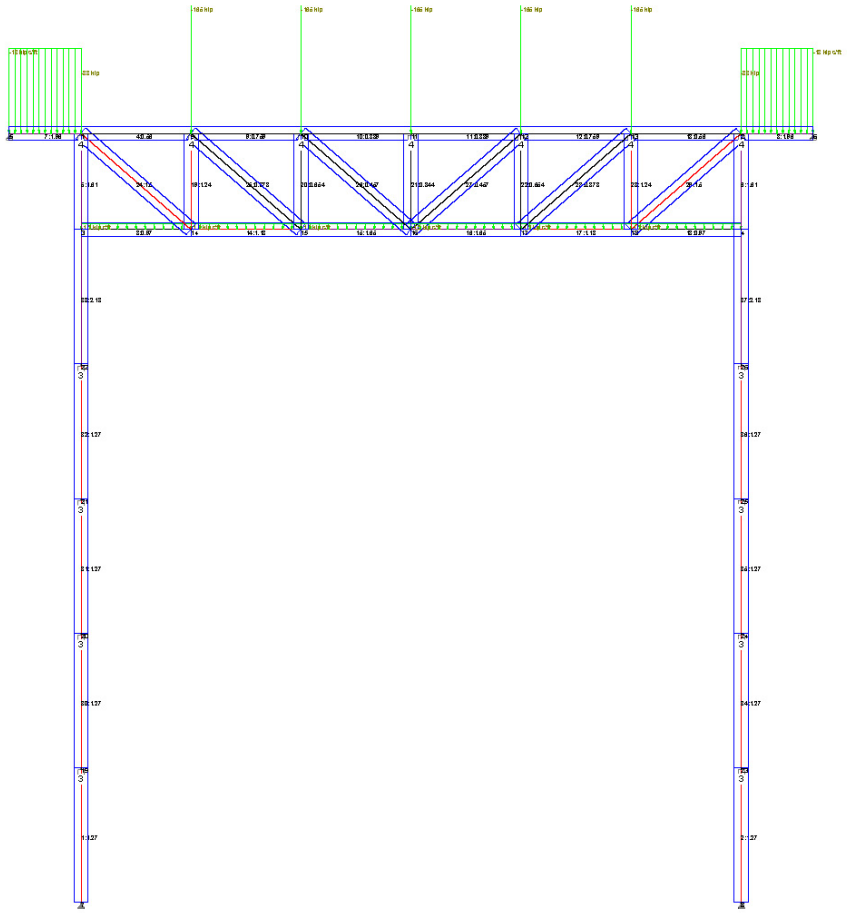
Obtain Commitments for Implementation

POST-STUDY

Complete Changes
Implement Changes
Monitor Status

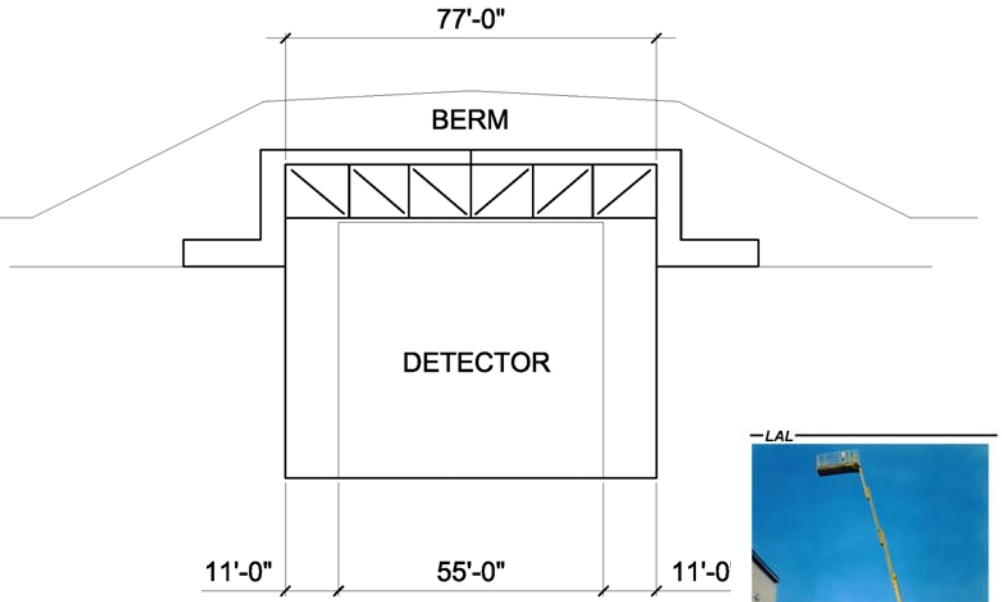
Methodology

- Utilized STAAD Structural Analysis Program
- Modeled and Run by Russ Alber (FESS/E)



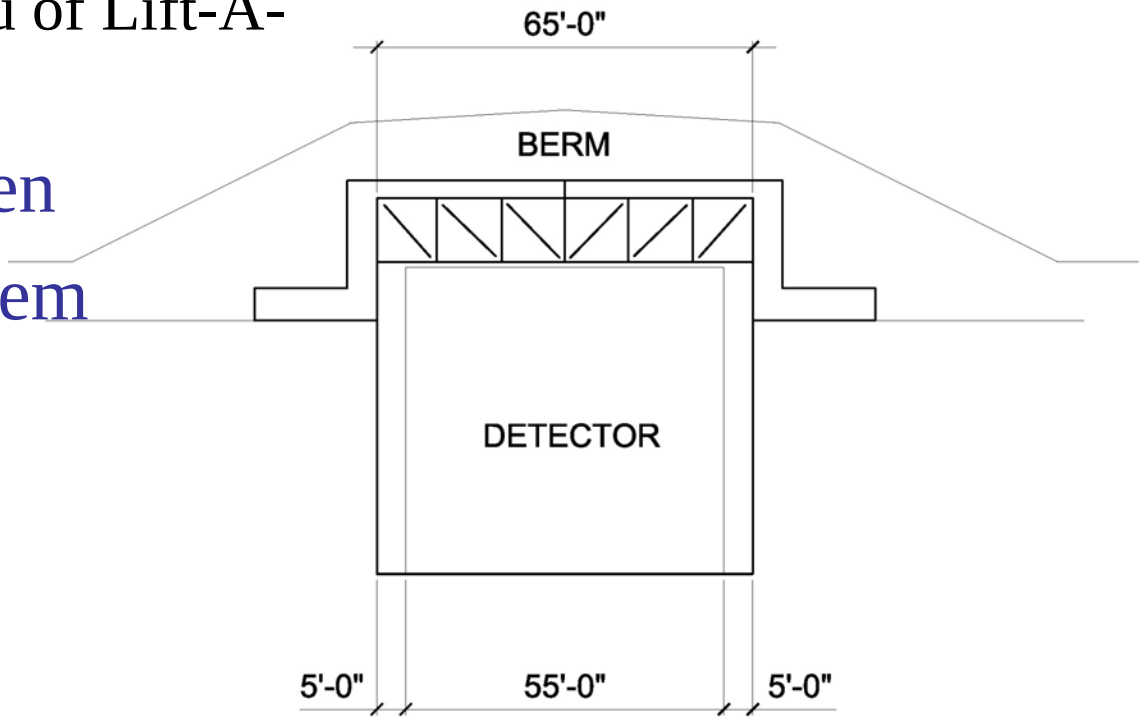
Detector Enclosure Roof

- Base Scheme – 77’-0” Span
  - 55’ Detector Envelope
    - modules+manifolds+cable tray + piping
  - 11’ Aisles
    - 7’-0” for Lift-A-Loft + 4’-0” for exiting
  - 10’ of overburden
  - Steel Truss System
    - Allows Top Access
    - Fabricated Off Site
    - Conducive to Winter Conditions



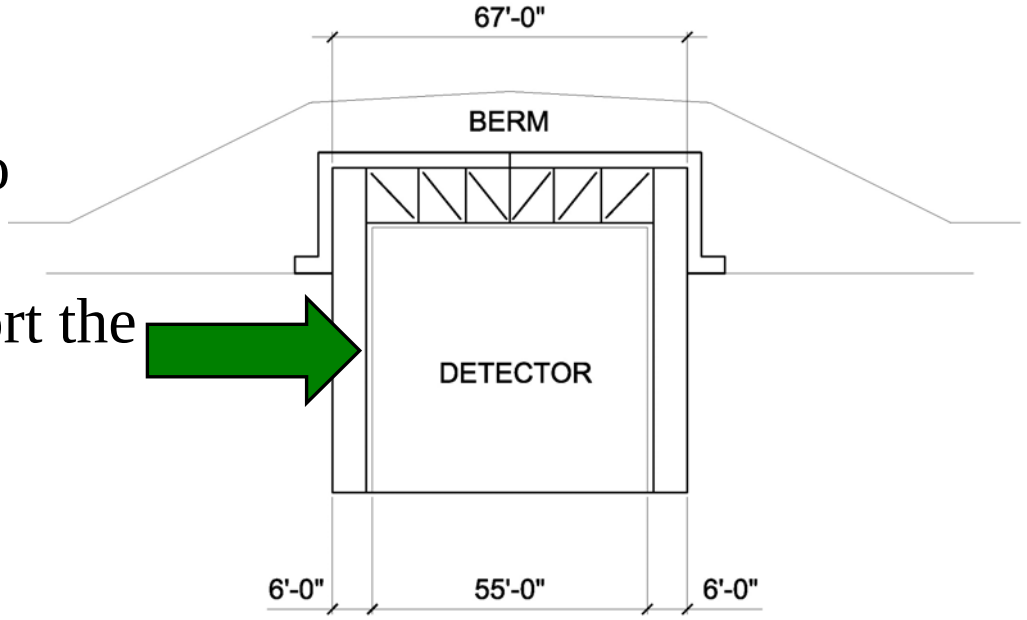
Detector Enclosure Roof

- Option 1 – 65’-0” Span
  - 55’ Detector Envelope
  - 5’ Aisles
    - Catwalks in lieu of Lift-A-Loft
  - 10’ of overburden
  - Steel Truss System



Detector Enclosure Roof

- Option 2 – 55’-0” Span
  - 55’ Detector Envelope
  - 6’ Aisles
    - Catwalks
  - 10’ of overburden
  - Steel Truss System
    - Columns adjacent to Detector
    - Columns also support the catwalks



Detector Enclosure Roof

- Evaluation Included
  - Cost
  - Compatibility with other systems
  - Constructability
  - Life Cycle Concerns

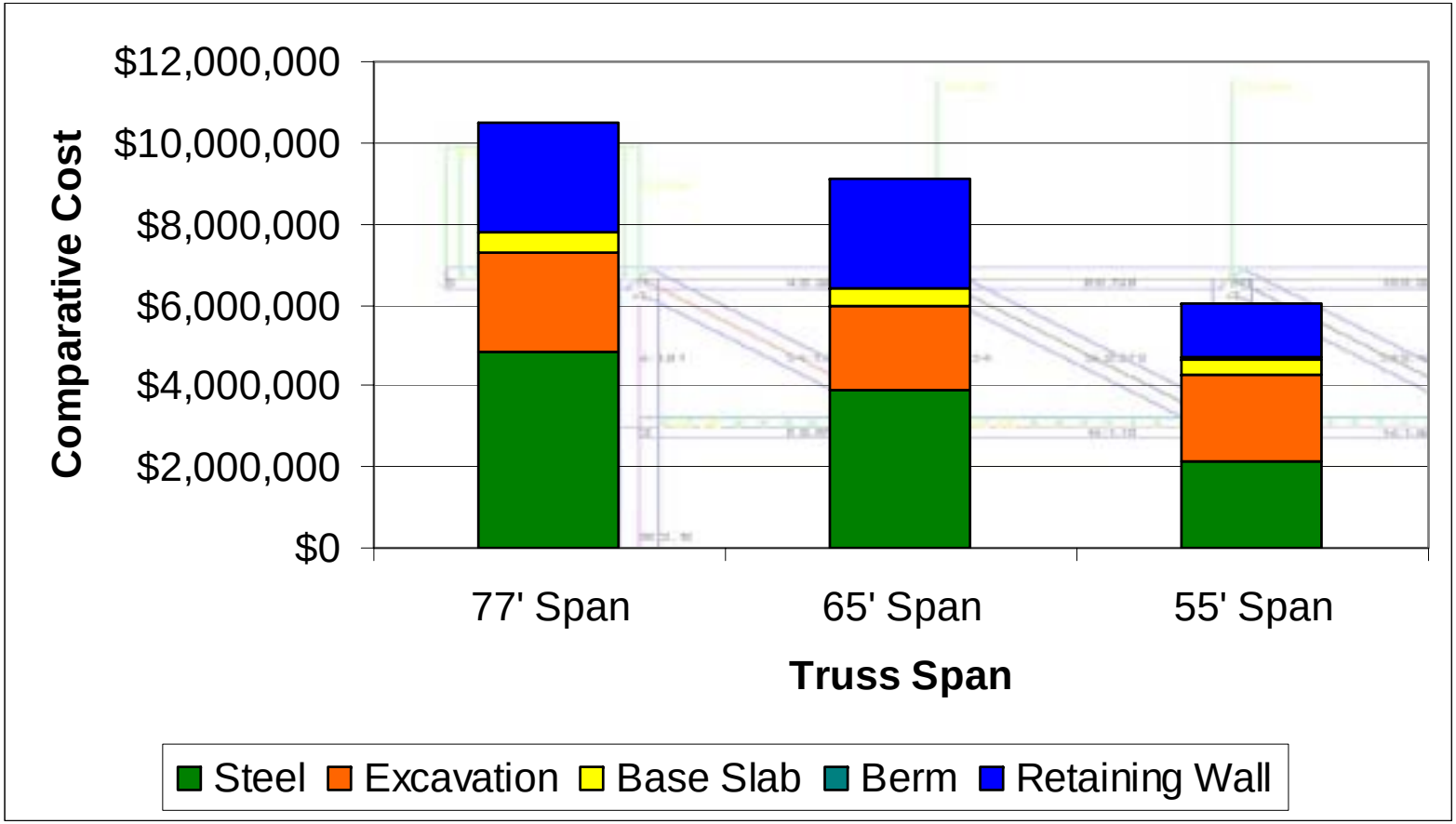
Detector Enclosure Roof

Selected Cost Drivers

Scheme Designation		Base	65' Span	55' Span
Structural Steel	K/Bent	68	55	30
	Total Steel (tons)	1615	1306	713
Excavation	Width	77	65	67
	Total Excavation (cu-yds)	64167	54167	55833
Base Slab	Total Conc. (cu-yds)	1925	1625	1675
Berm	Total Backfill (cu-yds)	2822	2556	2600
Retaining Wall	Total Conc. (cu-yds)	6000	6000	3000

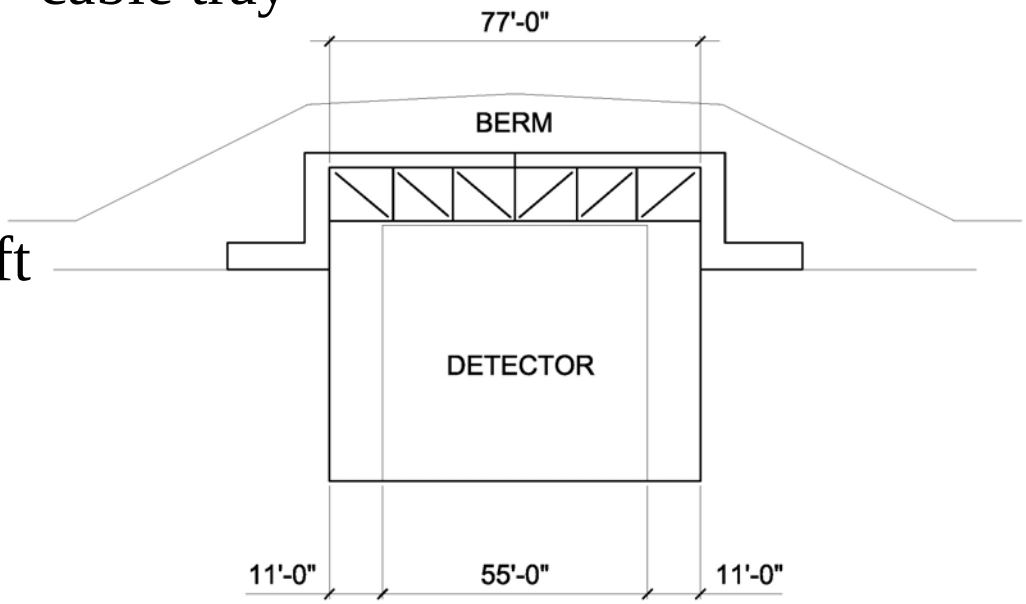
Detector Enclosure Roof

Comparative Cost Summary



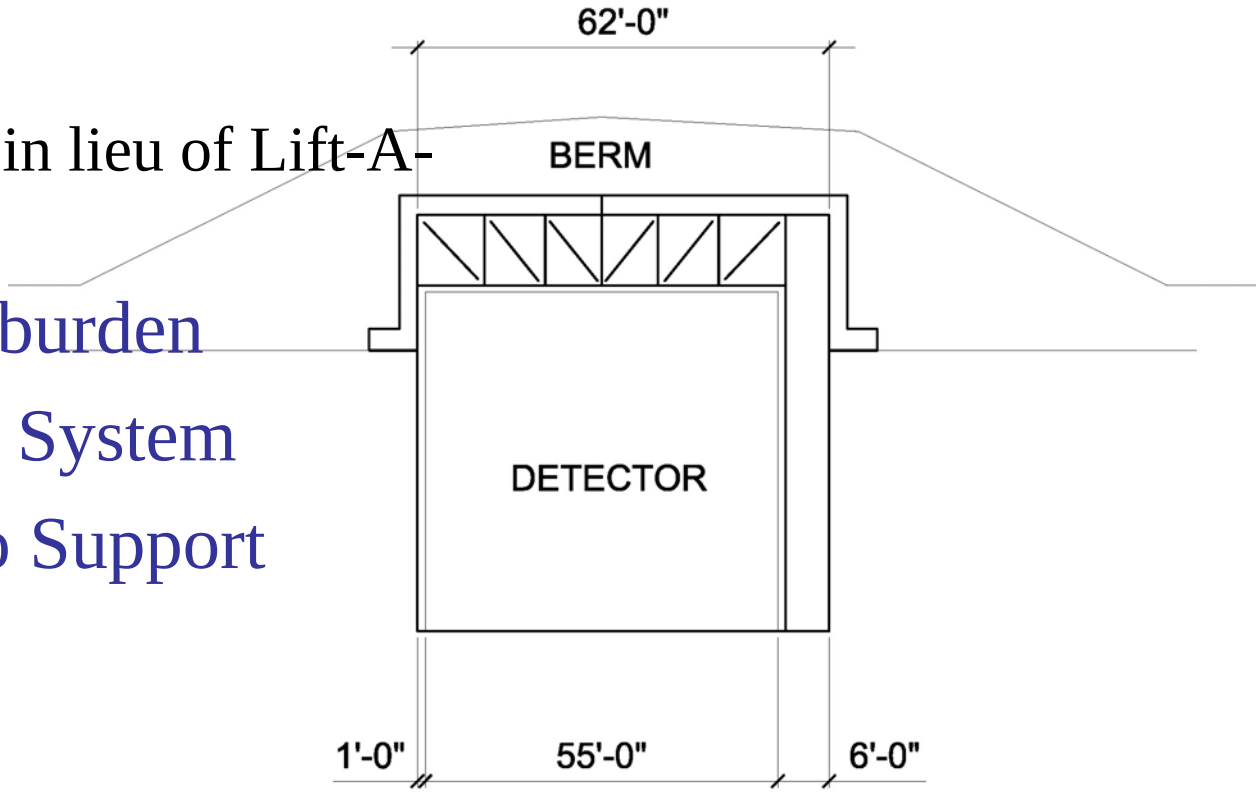
Single Aisle Access

- Base Scheme – 77’-0” Span
  - 55’ Detector Envelope
    - modules+manifolds+cable tray + piping
  - 11’ Aisles
    - 7’-0” for Lift-A-Loft + 4’-0” for exiting
  - 10’ of overburden
  - Steel Truss System



Single Aisle Access

- Option – 55’-0” Span
  - 56’ Detector Envelope
  - 6’ Aisle
    - Catwalks in lieu of Lift-A-Loft
  - 10’ of overburden
  - Steel Truss System
  - Columns to Support Catwalk



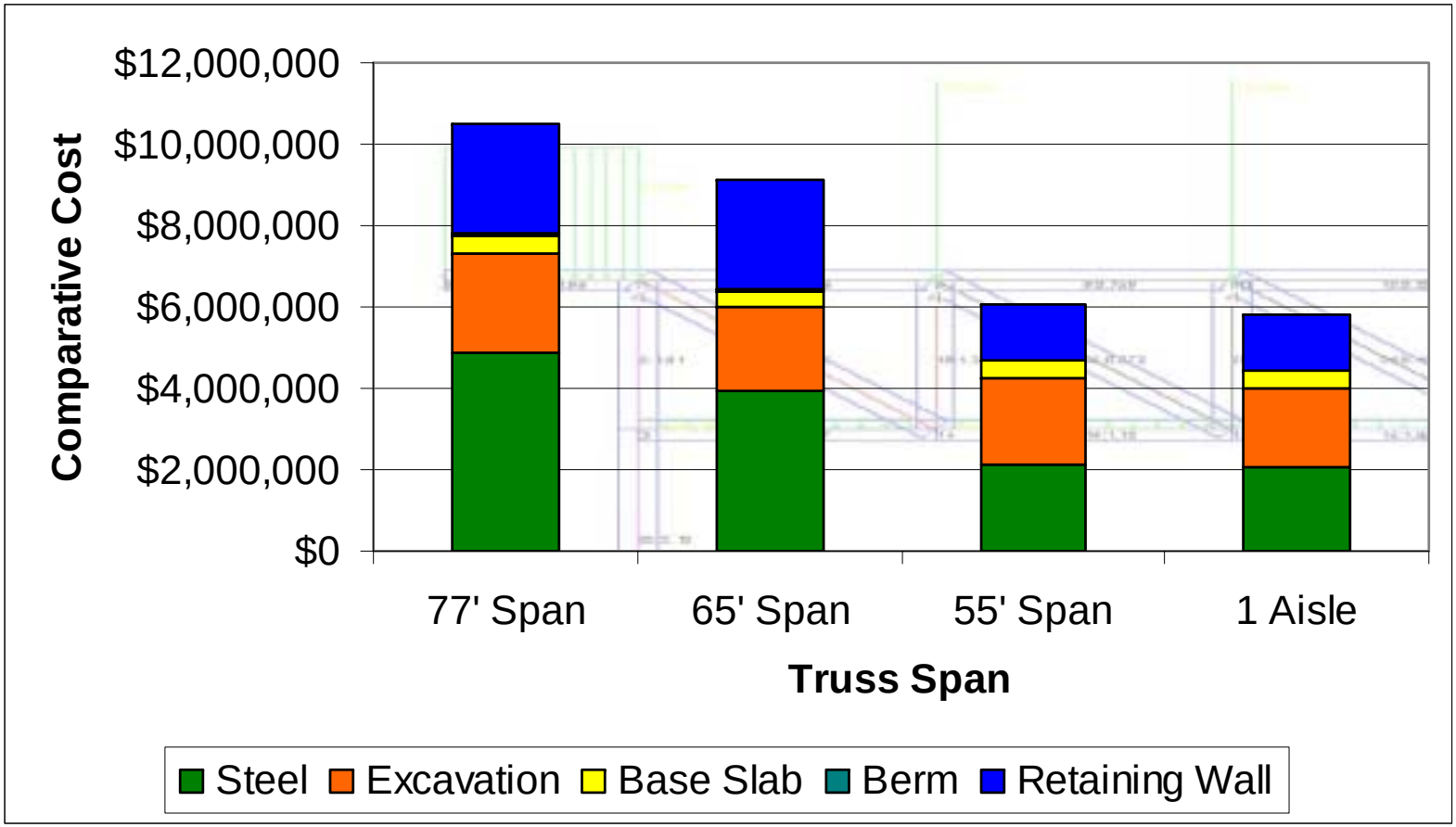
Single Aisle Access

Selected Cost Drivers

Scheme Designation		Base	1-Aisle
Structural Steel	K/Bent	68	29
	Total Steel (tons)	1615	689
Excavation	Width	77	62
	Total Excavation (cu-yds)	64167	51667
Base Slab	Total Conc. (cu-yds)	1925	1550
Berm	Total Backfill (cu-yds)	2822	2489
Retaining Wall	Total Conc. (cu-yds)	6000	3000

Single Aisle Access

Comparative Cost Summary

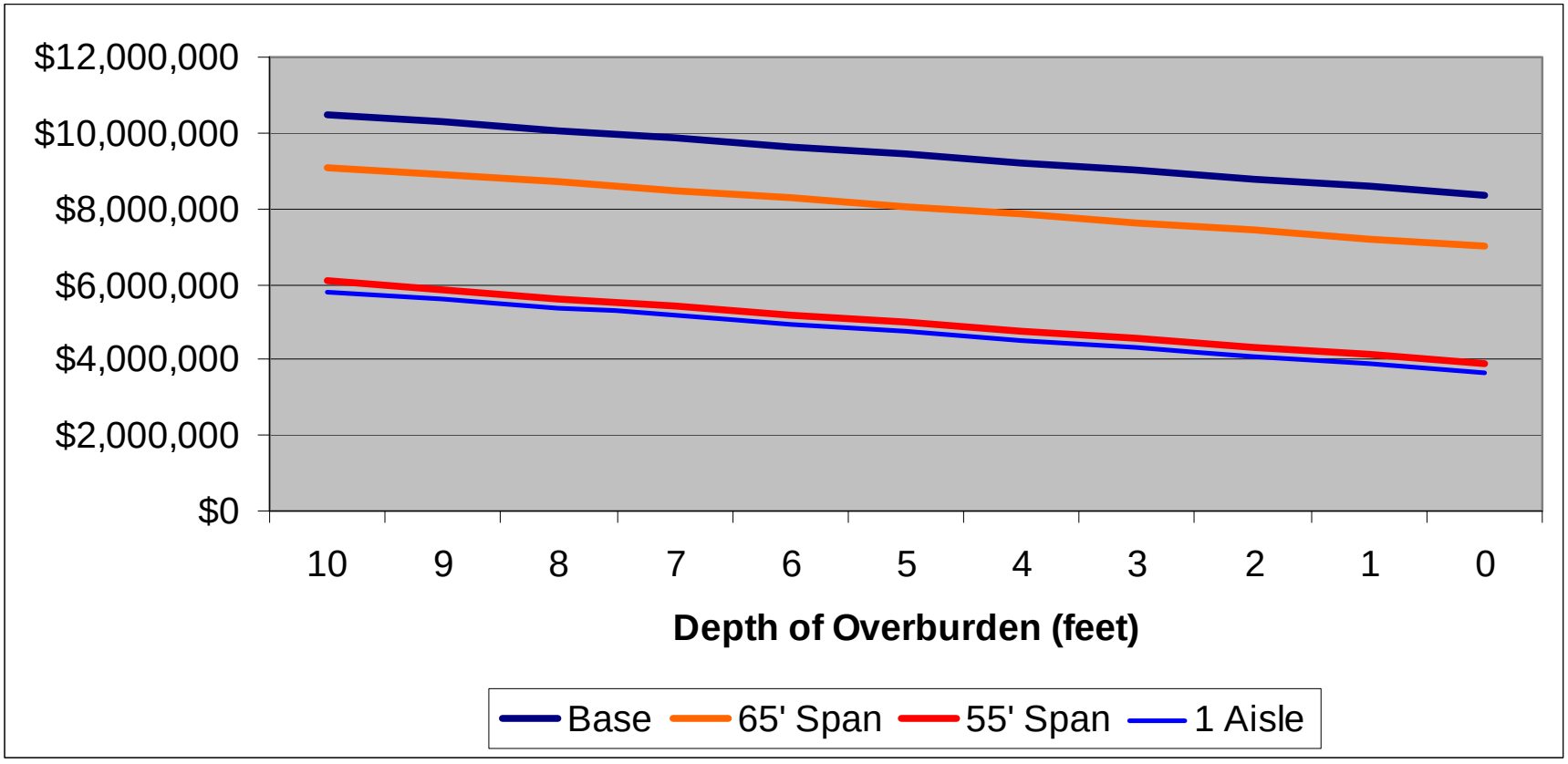


Overburden Depth

- Base Scheme – 10’ Depth
- Significant Cost Drivers
  - Same as Other VM recommendations
  - Structural Steel
  - Excavation
  - Concrete Base Slab
  - Overburden
  - Concrete Retaining Wall
- Included All Spans + Single Aisle Scheme

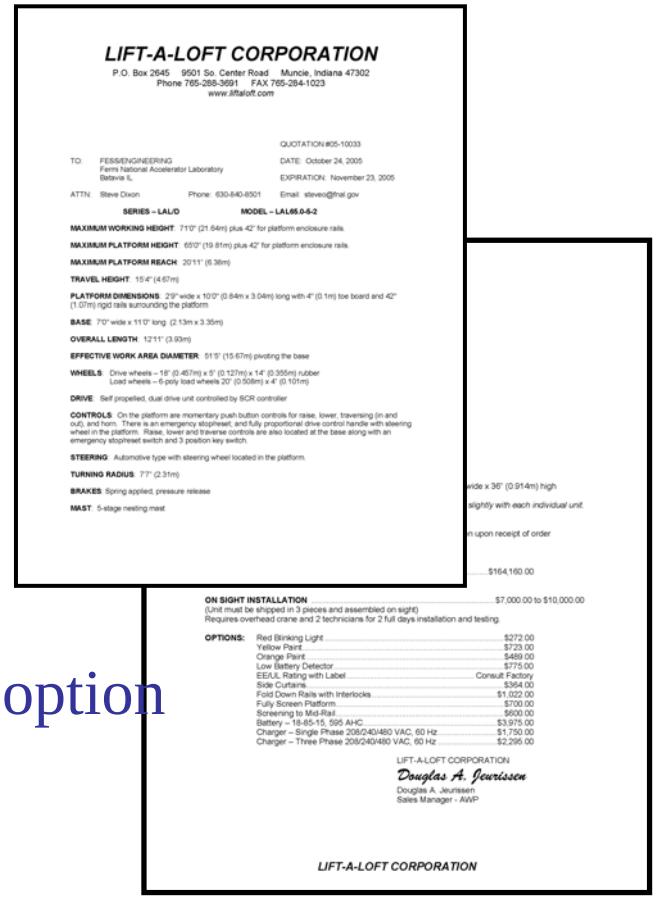
Overburden Depth

Comparative Cost Summary



Lift-A-Loft vs. Catwalk

- Lift-A-Loft proposal
  - Model LAL 65.0
  - 65’ platform height
  - 7’ wide x 13’
  - $184,052 each x 2 = $368k
- Catwalks
  - Utilizes steel columns from 55’ span option
  - Includes



LIFT-A-LOFT CORPORATION

P.O. Box 2645 9501 So. Center Road Muncie, Indiana 47302
Phone 765-288-3691 FAX 765-284-1023
www.liftaloft.com

QUOTATION #05-10033

TO: FESS/ENGINEERING
Fermi National Accelerator Laboratory
Batavia IL

DATE: October 24, 2005
EXPIRATION: November 23, 2005

ATTN: Steve Dixon Phone: 630-840-8501 Email: steveo@fnal.gov

SERIES – LAL/D **MODEL – LAL65.0-5-2**

MAXIMUM WORKING HEIGHT: 71'0" (21.64m) plus 42" for platform enclosure rails.

MAXIMUM PLATFORM HEIGHT: 65'0" (19.81m) plus 42" for platform enclosure rails.

MAXIMUM PLATFORM REACH: 20'11" (6.38m)

TRAVEL HEIGHT: 15'4" (4.67m)

PLATFORM DIMENSIONS: 2'9" wide x 10'0" (0.84m x 3.04m) long with 4" (0.1m) toe board and 42" (1.07m) rigid rails surrounding the platform

BASE: 7'0" wide x 11'0" long (2.13m x 3.35m)

OVERALL LENGTH: 12'11" (3.93m)

EFFECTIVE WORK AREA DIAMETER: 51'5" (15.67m) pivoting the base

WHEELS: Drive wheels – 18" (0.457m) x 5" (0.127m) x 14" (0.355m) rubber
Load wheels – 6-poly load wheels 20" (0.508m) x 4" (0.101m)

DRIVE: Self propelled, dual drive unit controlled by SCR controller

CONTROLS: On the platform are momentary push button controls for raise, lower, traversing (in and out), and horn. There is an emergency stop/reset, and fully proportional drive control handle with steering wheel in the platform. Raise, lower and traverse controls are also located at the base along with an emergency stop/reset switch and 3 position key switch.

STEERING: Automotive type with steering wheel located in the platform.

TURNING RADIUS: 7'7" (2.31m)

BRAKES: Spring applied, pressure release

MAST: 5-stage nesting mast

...wide x 36" (0.914m) high

...slightly with each individual unit.

...upon receipt of order

...$164,160.00

ON SIGHT INSTALLATION ...$7,000.00 to $10,000.00
(Unit must be shipped in 3 pieces and assembled on sight)
Requires overhead crane and 2 technicians for 2 full days installation and testing.

OPTIONS:

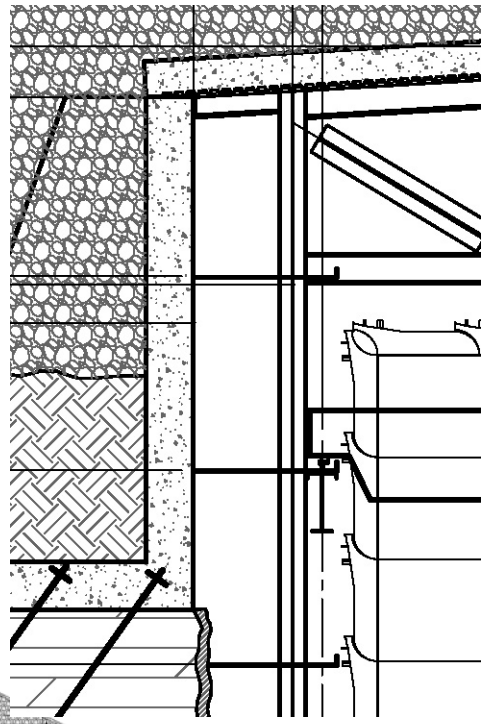
Red Blinking Light	$272.00
Yellow Paint	$723.00
Orange Paint	$489.00
Low Battery Detector	$775.00
EEUL Rating with Label	Consult Factory
Side Curtains	$364.00
Fold Down Rails with Interlocks	$1,022.00
Fully Screen Platform	$700.00
Screening to Mid-Rail	$600.00
Battery – 18-85-15, 595 AHC	$3,975.00
Charger – Single Phase 208/240/480 VAC, 60 Hz	$1,750.00
Charger – Three Phase 208/240/480 VAC, 60 Hz	$2,295.00

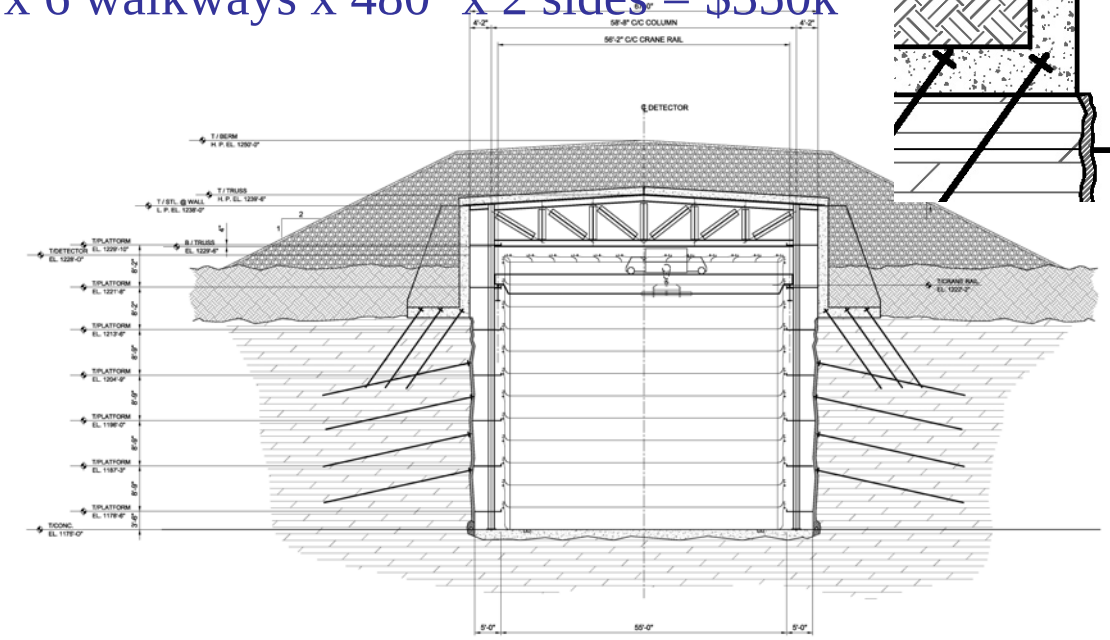
LIFT-A-LOFT CORPORATION
Douglas A. Jeurissen
Douglas A. Jeurissen
Sales Manager - AWP

LIFT-A-LOFT CORPORATION

Lift-A-Loft vs. Catwalk

- Catwalks
  - Utilizes steel columns from 55’ span option
  - Provides 44” clear aisleway
  - Steel grating
  - $60/SF x 6 walkways x 480’ x 2 sides = $350k





What's Next

- Formalize these recommendations per the DOE guidelines